

Notice of Allowability

Application No.

10/630,738

Examiner

Sow-Fun Hon

Applicant(s)

NAM, MI SOOK

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 5/12/06.
2. ☒ The allowed claim(s) is/are 1, 2 and 33.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/893,977.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 7/7/06, 9/11/06.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other See Continuation Sheet.

Continuation of Attachment(s) 9. Other: The drawing filed 7/31/03 is accepted by the examiner.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

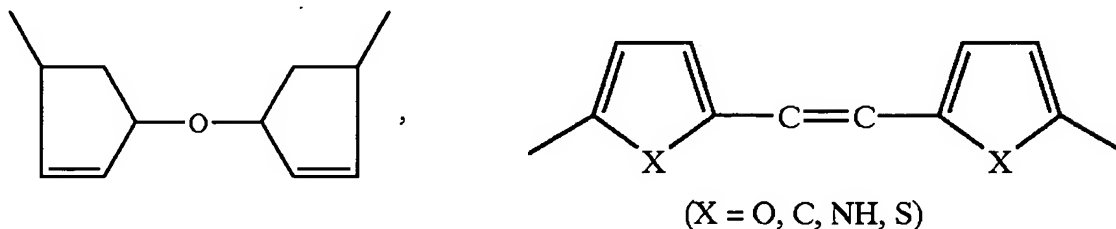
Authorization for this examiner's amendment were given in two separate telephone interviews with Salena Mohamedulla, one on July 7, 2006, and one on September 11, 2006.

The application has been amended as follows:

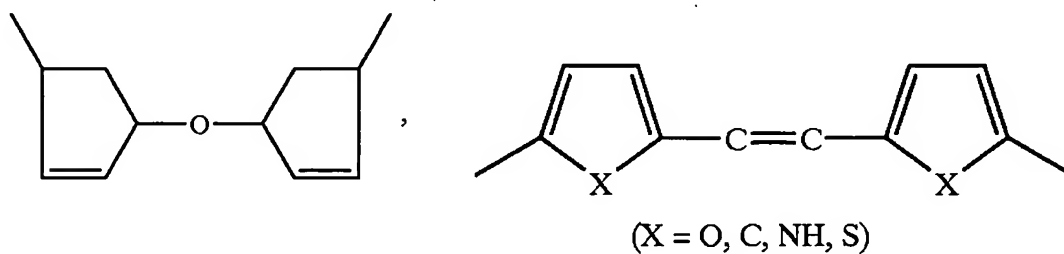
2. Preliminary amendment to specification, dated 07/31/03: amend paragraph [0001.1], line 2: after "filed June 29, 2001", insert - - , now United States Patent 6,627,269. - -
3. Claim 1: line 6, before "and wherein component A is a monomer", and after " $0 < a \leq 1$, $0 \leq b < 1$, and $0 \leq c < 1$,"; insert - - wherein components B and C are monomers, - -.
4. Claim 1: substitute line 7, "including the photo-reactive ethenyl group ... formula", with - - unit including the photo-reactive ethenyl group selected from structure groups designated in chemical formula - -
5. Claim 1: substitute line 10, "group having 1 to 10 carbons, ... a haloalkyl aryl, a", with - - group having 1 to 10 carbons, or an aryl, a haloaryl, a haloalkyl aryl, a - -

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6. Claim 1: After line 12, "{Chemical Formula 2}", substitute lines 13-25 (entire set of chemical drawings under chemical formula 2) with - -



7. Claim 2: Line 4: After "groups with", delete "carbonated groups".
8. Claim 2: Substitute lines 4-6, "groups with carbonated groups ... a nitroaryl, and a cyanoaryl;" with - - groups with an alkyl, a haloalkyl, and a cyanoalkyl group of which the carbon number lies between 1 and 10 and other substituted-structure groups with an alkylaryl, a haloaryl, a haloalkylaryl, a nitroaryl, and a cyanoaryl group of which the carbon number lies between 3 and 8; - -
9. Claim 33: line 7, After "wherein component A is a monomer", insert - - unit - -
10. Claim 33: line 8, After "and the monomer", insert - - unit - -
11. Claim 33: line 12, After "wherein", substitute "forumula" with - - formula - -
12. Claim 33: After line 13, "{Formula 2}", substitute lines 14-26 (entire set of chemical drawings under formula 2) with - -



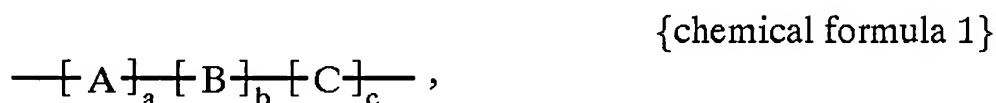
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13. Claim 33: line 27: After "wherein component B and C are", replace "monomers" with - - monomer units - -

14. Claim 33: line 28: After "formula 3, and the", replace "monomers" with - - monomer units - -

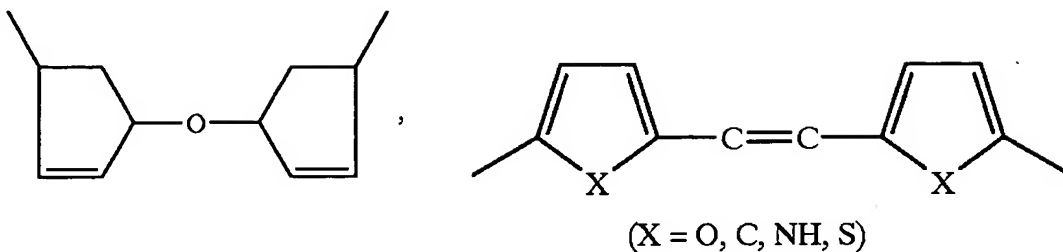
15. Claim 33: line 30: After "amino" replace "group, " with - - , an - -

16. The following is an examiner's statement of reasons for allowance: the closest cited prior art of record, US 5,486,560 and US 6,270,938, fail to teach or suggest, even in combination with each other, US 6,682,783 and JP 11-140168, a photo-alignment material having a photo-reactive ethenyl group in a polymer main chain, wherein the polymer is according to chemical formula 1:



wherein subscripts a, b and c denote a component ratio of respective monomers, wherein $0 < a \leq 1$, $0 \leq b < 1$, and $0 \leq c < 1$, and wherein component A is a monomer including the photo-reactive ethenyl group, selected from the two groups designated in chemical formula 2 as amended by this Examiner's amendment, and shown on the next page. None of the references teach the two monomers including the photo-reactive ethenyl group in the main chain of the polymer according to chemical formula 1.

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The claims in this application, and the claims in correlated application serial number 10/630,781, now US Patent 6,797,096, are the result of a restriction requirement in parent application serial number 09/893,977, now US Patent 6,627,269, which obviates any double patenting over said two US patents.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon

Sow-Fun Hon

09/11/06

Rena Dye
RENA DYE
SUPERVISORY PATENT EXAMINER 9/11/06
See EBC Center 1700